the greater part of his life.''¹ He was, as has been said by one of his compeers, a self-made man in the best sense of the word. His monument is the Department of Birds in the British Museum, the British Museum 'Catalogue of Birds,' and his 'Handlist of the Genera and Species of Birds.'

Dr. Sharpe was married in 1867, and leaves, besides his widow, a family of ten daughters.

Dr. Sharpe's death is a great loss to science, and an almost irreparable one to the British Museum Department of Birds, which has acquired its preëminent rank among the great ornithological collections of the world mainly through his efforts; while his long series of contributions to the literature of ornithology will be his enduring memorial to the end of time.

NOTES ON SOME OF THE RARER BIRDS OF WASHTENAW COUNTY, MICHIGAN.²

BY N. A. WOOD AND A. D. TINKER.

The writers have found in their work in Washtenaw County that the present status of certain species of birds that inhabit the region is not known or is different from what has been recorded. Our object in this paper is to give a summary of the occurrence of these forms at the present time, as it appears from our notes and the specimens in the University of Michigan Museum.

A. B. Covert's ³ list of the birds of Washtenaw County, and A. J. Cook's ⁴ list of Michigan birds (Washtenaw County records from Dr. J. B. Steere) give the only general summaries of the occurrence of the species in the County, and will be frequently referred to. The miscellaneous notes on the subject that have appeared in the literature will be cited in the text.

¹ Fagan, l. c., p. 283.

² From the University of Michigan Museum.

³ Covert, A. B. Birds, in History of Washtenaw County, Chicago, 1881.

⁴ Cook, A. J. Birds of Michigan. Bull. 94, Mich. Agri. Exp. Sta., 1893.

Sterna hirundo. WILSON'S TERN.—In Cook's list of Michigan birds, this species is not given from Ann Arbor, but A. B. Covert in 1881 recorded the species as "A common migrant." Since that time the records of its occurrence here have been very meager, only three previous to 1905. The only specimen from Ann Arbor in the Museum was taken May 16, 1891. From 1905 to the present time it has been seen every year, migrating up the Huron River. Our earliest spring record is that of April 12, 1908, when 13 were observed at Fourmile Lake. The latest spring record is that of May 23, 1903, when seven were recorded at Portage Lake by Wood. It is possible that the species may breed around some of the lakes of the County, as one was noted at Portage Lake on June 27, 1909, but of this nothing positive has been ascertained. Our earliest fall record is September 1, 1908.

Hydrochelidon nigra surinamensis. Black Tern.— Covert apparently found the species quite abundant for he gives it in his list as "Migrant, quite common." Since that time, however, we can find but few records for this vicinity. Wood took a fine specimen near Saline, Washtenaw Co., on May 19, 1892, and May 21, 1903, he recorded them at Portage Lake. May 19, 1907, one was observed migrating up the Huron River toward Portage and Zukey Lakes. June 27, 1909, Mr. Wood noted a pair at Portage Lake. They have occasionally been seen during the summer about Bass Lake, just to the northeast of Portage, and may possibly breed in the extensive marshes about that lake.

Mareca americana. Baldpate.— In 1881, Covert speaks of the species as a "Common migrant." However for the past thirty years there have been but very few records for the County. In the Museum collection there is a specimen labelled "Ann Arbor, spring 1886, M. M. Bigelow." Two fine specimens — a male and female — were taken by Edward Campbell at Pleasant Lake on April 17, 1909.

Spatula clypeata. Shoveller Duck.— Covert gives the species in his list as "Summer resident." Dr. J. B. Steere in Cook's list says "A questionable summer resident." Since 1881 we have had very few records and the species is certainly rare here at the present time. It has not been known to breed within the County during the past fifteen years. It is questionable whether the species should

ever have been classed as a summer resident. Our earliest spring record is April 8 (1888) and the latest April 20 (1899). Our only fall record is the single bird noted by Mr. Wood, on a small pond southeast of Ann Arbor, October 1, 1907. In 1908, the species was recorded at Fourmile Lake on April 12 and in 1909 on March 27.

Aix sponsa. Wood Duck.—Covert speaks of the species as a "Summer resident, not rare." Subsequent records show that this beautiful species, although not as common of late, has still been able to withstand the persecution of gunners to such an extent that a few pairs still breed in suitable localities along the Huron River. Our earliest spring record is February 17 (1890). On April 15, 1909, a fine male was caught in a trap set for muskrats, and on April 25 a female with a brood of young was seen on the Huron River not far from Ann Arbor.

Marila collaris. RING-NECKED DUCK.— In the 'Birds of Michigan' Cook gives the species as a "Rather common migrant" but of late years very little mention has been made of it in the literature. In Michigan, as well as in Ohio, it seems to be a rather rare migrant. Covert speaks of it as a "Common migrant in the County," but we have only one authentic record for this vicinity, and that is an adult male, taken on the Huron River near Geddes, March 20, 1909, by F. Novy. In the Museum are three specimens labelled, "S. E. Mich.— coll. Dr. Sager, Nat. History Survey of 1837–8," but it is not certain whether these were taken here or in adjacent counties.

Tympanuchus americanus. PINNATED GROUSE.— This species was formerly common near Ann Arbor but during the years 1880–1890 became nearly extinct within the County. Of late, however, owing to protective laws, it is on the increase, and may become fairly abundant again. On April 4, 1909, the writers noted the species at Fourmile Lake, where conditions are very favorable for its continued increase.

Asio flammeus. Short-eared Owl.— Covert gives the species as "A very abundant resident," and Steere says, "Not rare at Ann Arbor" (Cook's list). We have several records of the occurrence of the species between December 1 and April, but only one for the summer months. On June 24, 1907, a brood of four young just able to fly was found in a big marsh in the old "drainage channel"

five miles southwest of Ann Arbor. Three of these were secured and one is now preserved in the Museum. April 4, 1909, a small flock of five was observed in an extensive marsh at the north end of Fourmile Lake in this County. It is quite possible that the species is a regular breeder, but we lack the necessary data to make this certain.

Archibuteo lagopus sancti-johannis. American Rough-legged Hawk.— Covert apparently found the species rather common in 1881, as he speaks of it in his list as "Very common in the fall." Our present knowledge of the species, however, would hardly permit us to make such a statement, as upon investigation we have been able to find but few records for the County. January 22, 1888, Wood caught one in a trap; on March 20, 1899, a fine specimen was taken near Ann Arbor in a trap; one was shot on March 15, 1897, and on October 30, 1909, W. Ransome secured a beautiful specimen just north of the city. Judging from the apparent scarcity of records it can safely be stated that the species is a rare and irregular visitant in the County, being most often noted in the winter and early spring months.

Falco columbarius. PIGEON HAWK.—A rare migrant at all times within the County; but few records have been secured. One was taken near Ann Arbor on March 1, 1896, and a fine male on October 19, 1890. On November 5, 1900, a beautiful female was taken about four miles south of Ann Arbor and presented to the Museum. Covert considered the species to be a rare migrant in 1881, and recent observations confirm his opinion.

Centurus carolinus. Red-bellied Woodpecker.— Covert gives the species as "Very common, breeds in heavy timber." Since the above was written a large portion of our heavy timber has been removed, and, as our records show, the species is in consequence fast becoming a rare one in the County. But nine records have been secured in the last twenty years, and these are as follows: June 1, 1896, Wood noted a pair in heavy woodland west of Ann Arbor; May 1, 1896, a pair was noted northeast of the city. On November 28, 1902, E. H. Frothingham secured a male. May 6, 1905, Wood took a male just east of Ann Arbor, April 1, 1906, it was noted about two miles west of town. March 31, 1907, O. McCreary found one five miles west of Ann Arbor. April 11, 1909, one was noted in heavy timber along the Huron River below Geddes Station.

Nuttalornis borealis. OLIVE-SIDED FLYCATCHER.—This species is not mentioned from Ann Arbor in Cook's list, but there is, in the Museum collection, a pair that was taken here May 28, 1896, by A. B. Covert. Other records are May 1, 1903 (Wood), and June 6, 1907, May 18 and 29, 1908 (Tinker). Our only fall record is that of a single bird noted in one of the cemeteries of the city, on October 7, 1908. The species is far from common during either migration, and may be considered rare at all times.

Empidonax virescens. Green-crested Flycatcher.—In 1881 Covert considered the species to be a rare summer resident. At present it cannot be looked upon as anything but a rare migrant for this vicinity, our records not warranting us in classing it as a summer resident. The only records that we have are, one taken on May 27, 1869, by W. Harrington and one secured on May 15, 1896, by D. C. Worcester.

Spinus pinus. PINE SISKIN.— In Cook's 'Birds of Michigan,' Steere gives the Pine Siskin as "Rare at Ann Arbor," while A. B. Covert, in 1881, says of it, "Winter visitant from the north." Since 1893 it seems to have become more common during both migrations, as it was fairly abundant in the spring of 1907, from May 17 to 24, while in the spring of 1908 it was recorded on May 9 and 10. In the fall of 1908 Pine Siskins first made their appearance at Ann Arbor on September 26, and continued abundant up to November 8, disappearing on the 15th: during the latter part of September and, October 1, they were frequently observed feeding on the aphids which infested the shade trees of the city. On January 13, 1909, three were observed within the city, and during the spring they were noted about the city from May 6 to 23. They were most often seen in small bands of a dozen or more individuals about coniferous trees.

Passerculus sandwichensis savanna. SavannaH Sparrow.—Covert gives the species as "A common migrant" in his list of 1881, but since that time our records show that it is far from common here, especially in the fall. A female was taken at Ann Arbor on May 12, 1905, and on April 28, 1907, a male was taken and a number of others noted, south of town. This year — 1909 — it was more common, an adult male being secured on April 14 and other specimens on May 4 and 19. Up to date we have no fall records.

Ammodramus henslowi. Henslow's Sparrow.— Covert gives this sparrow as "A very rare summer visitor." There is a specimen in the Museum labelled "Ann Arbor, May 26, 1894, ad. female, collected by A. B. Covert." Since that time the species was not recorded from this locality until April 18, 1909, when a fine adult male was found dead at Ypsilanti. On May 1, 1909, Mr. Wood was fortunate enough to secure a female just east of Ann Arbor, and on May 31, 1909, a singing male was found in a partially drained marsh west of Ann Arbor. Diligent search was made for a nest of the latter but none could be found, although the bird gave every evidence of having one in the vicinity, and seemed loath to leave the locality. More extended field work may show the species to be more common than seems to be the case at present.

Cardinalis cardinalis. Cardinal.— In Cook's list (1893), we find the statement by Dr. Steere "never seen at Ann Arbor," and it is not given in Covert's list of 1881. The first record that we have of its occurrence here is on June 14, 1884. On May 24, 1903, a nest with one egg was found near Ann Arbor, and since that year the species has gradually gained a foothold, until at the present time it may be said to be a permanent resident. The Cardinal is one of those species that has apparently gradually extended its range from the south, and will in the future become more common where it has heretofore only been known as an accidental visitant. Other breeding records were secured in May, 1905, and on May 8, 1909.

Stelgidopteryx serripennis. ROUGH-WINGED SWALLOW.— Covert does not mention this swallow in his list, but since that time the species seems to have been gaining a foothold in the County, although still rare as a migrant and summer resident. Our earliest spring record is that of April 23, 1906. On May 13, 1905, Wood found a pair nesting with a colony of Bank Swallows and secured the male. In 1906, it was first recorded on April 23, and in May was found breeding alone in a small gravel-pit near Ann Arbor. On May 10, 1907, a pair was found nesting in the same pit as above. During the spring migration of 1908 the species was fairly abundant from April 29 to May 15. On May 1, 1909, Wood noted a flock of twelve down the Huron River, and from that date to the middle of May it was fairly abundant, apparently being held

here on the migration by the severe weather. May 28, 1909, a pair was found nesting in company with Bank Swallows.

Lanivireo solitarius. Blue-Headed Vireo. — Although in Cook's list (1893) the species is not mentioned from Ann Arbor. Covert (1881) speaks of it as "A not common migrant," and since that time but few records have been secured. Our earliest spring record is May 2, 1905. On May 10, 1901, Wood and J. Ricks each secured specimens. The species was again noted in 1903, on May 10 and 30, while in 1906 three were recorded on May 4, and on September 26 of the same year Wood secured a specimen at Portage Lake. It was recorded on May 9 and 14, 1907, and May 6 and 7, 1909. On the latter date a fine male and female were noted. Although oceasionally observed in the fall, as on October 7, 1908. and September 26 and October 17, 1909, most of our records are for the spring migration and are confined to the first two weeks of May. From the foregoing it can readily be seen that the species apparently has not increased to any extent since 1881, and, although a more or less regular migrant through here, is far from common at any time.

Dendroica tigrina. Cape May Warbler.— Our earliest record of the taking of the species within the County is the female in the Museum collection, taken in the fall of 1869 by W. Harrington. It seems to be somewhat irregular in its occurrence here, for while in some years it is fairly common, in others it is apparently entirely absent. In 1907 the Cape May was far from common both in the spring and fall, but in 1908 several were seen and taken between May 15 and 18. In 1909, the species first made its appearance on May 6, and remained until May 23. In the spring, males seem to be the more numerous, while in the fall females and immature birds outnumber the adult males three to one. During the fall of 1908, the species was remarkably abundant, first appearing on September 9 and remaining until September 27, the majority being either females or immature birds.

Dendroica cerulea. Cerulean Warbler.—Covert gave this warbler, in 1881, as "A very common summer resident, breeds; nesting in the tops of tall trees." Since that date we have found them very irregular and local in their occurrence; some years none at all being seen. In 1903, Wood found several nests, but the next

year he was not able to locate one, although the same territory was thoroughly searched. In 1908, the species appeared to have returned in some numbers, as it was recorded on May 16, and on May 24 a number were found in full song, in a heavy swamp about seven miles west of Ann Arbor. The spring of 1909 found the species present, but only in limited numbers. On July 20, 1909, F. Novy took an immature bird near here, a few others being noted at the same time. In all probability the decrease in the number observed may be attributed to the destruction of the heavier timber which apparently forms a prominent factor in the environmental conditions preferred by this warbler.

Dendroica castanea. Bay-breasted Warbler.— Covert considered the Bay-breasted Warbler as not very common, but in recent years it seems to be fairly common during the migrations, especially in the fall. Our earliest spring record is that of May 3, 1905, and one was taken as late as June 6 (1908). In the fall it has been taken here as early as September 5 (1896) and as late as September 30 (1905). In 1907, the species was quite common, first making its appearance on May 13, and remaining until June 6. As a general thing the males appear to be more abundant in the spring than the females, while in the fall the immature birds form the bulk of the migrants. In 1908, the Bay-breasted was quite common during both spring and fall, but especially in the fall, when they were the most abundant species present from September 27 to October 1. In the spring and fall of 1909, the species was not as common as in the previous year.

Dendroica striata. BLACK-POLL WARBLER.— Covert says of the Black-poll, "The last of our warblers to arrive in spring, when it comes in immense numbers." We have never found it common at any time, and it is only occasionally that the species is present in any numbers. In the spring of 1907, Black-polls came May 16, and were unusually common, remaining until June 6. Our earliest spring record is May 13 (1904) and the latest June 6 (1907). The spring of 1908 found the species fairly common, especially on May 18 when a number were observed, and they were with us from May 16 to 25. In the fall of that year they were even more abundant, being noted from September 9 to October 7, and in considerable numbers on September 27.

Dendroica dominica albilora. Sycamore Warbler.- In 1881,

Covert wrote of this species as follows: "I cannot learn that this bird has ever been shot in the County, still I have taken it in other portions of the State and I think that it will yet be detected here." This prophecy eventually came true for on April 22, 1906, a fine male in full song was noted in a grove of sycamores along the Huron River, about half way between Ann Arbor and Ypsilanti (Tinker). On April 25, 1906, Wood took a fine male in the same locality, and noted the species again on April 26 and 29. The species in all probability bred here at that time for it was still present on May 6, but we were unable to locate nests. Wood has a specimen taken near Ypsilanti on May 17, 1893, by Van Fossen. Although diligent search was made for the species in 1907, nothing was seen of it, but in 1908 a male in full song was noted in the same locality as the others noted above, on April 26, and again, on April 29, Wood noted two here, securing one for the Museum. The species was noted in song on June 21, 1908, but no breeding records were obtained.

Dendroica vigorsi. PINE WARBLER.— Covert says of this species "Rare summer resident in this County." There is no question as to the rarity of the Pine Warbler here at the present time, but we doubt if it ever bred within the County, as we have not been able to find any record to support Covert's statement. Our records for the occurrence of the species are as follows: On April 28, 1898, Wood secured a fine male — now mounted in his collection. For 1907 there are several records: Wood first detected the presence of the species on April 26, when he secured an adult male; on April 27 he took another specimen, and on May 2 a male and female were noted feeding in the coniferous trees in one of the cemeteries of the city. The male of the last named pair was in full song at the time.

In 1908 the species was first recorded on April 23, when three were noted, but it was also observed on April 24. More were noted in the spring of 1909 than in any previous season, the species first being observed on May 1 and afterwards on May 4 and 11. Nearly all of the records secured in the spring have been of adult males in full song. The apparent scarcity of the Pine Warbler here is no doubt due to the lack of a suitable environment, as the County is almost devoid of the natural coniferous growths preferred by this species.

Dendroica discolor. Prairie Warbler.- In 1881, Covert found the species a rare one in the County, as it is at the present time. On May 10, 1901, a beautiful female was secured two miles east of Ann Arbor, at the edge of a large brush pile in an apple orchard. On May 9, 1903, a fine male was taken at the edge of a tamarack swamp, and on May 2, 1905, two males were secured in hazel brush on the banks of the Huron River below Ann Arbor. The species was recorded but once in 1906 — May 4 — but in 1907 it appeared to be more numerous, although far from common. In that year it was first noted on May 12, when one was found in a large apple orchard east of town and another in a brushy lot in the same general locality, and again on May 13 (adult male), 14 (female) and 15 (female). The only record for 1908 was that of one specimen noted in the vicinity of Ypsilanti on May 16. In the season of 1909 four records for the species in this vicinity were secured; the first on May 11, and the others on May 12, 16, and 18. On all four of these occasions the birds were found in full song.

Seiurus motacilla. Louisiana Water-thrush.— Covert apparently found this Water-thrush rather common, as he wrote in 1881 as follows: "A very common summer resident, breeding in swampy timberlands." Our experience with the species certainly does not bear out this statement, as we have found it only as a rare summer resident and migrant. On May 8, 1896, the species was found breeding near South Lyon, by Covert and Wood, and this seems to be the only breeding record for the County. On June 16, 1906, an adult male was found dead on the college campus. The testes in this individual were well developed showing that it was possibly a breeding bird. Of late years it has been recorded nearly every spring, as May 12, 1904, May 10, 1905, May 6, 1907, and April 26, 1908. But up to 1909 these are the only records we have, with the exception of the single bird taken by Wood on August 15, 1905. In 1909, the species seemed to be more common, as it was frequently noted in full song from April 28 to May 16.

Oporonis agilis. Connecticut Warbler.— In regard to the presence of this species in the County, in 1881, Covert says: "I have secured one specimen in this County — May 17, 1880." We have always found it a rare spring migrant and a very rare fall migrant here, in fact our only fall record seems to be that of an

adult male taken in the vicinity of Ann Arbor on September 9, 1896. In 1906, the species was noted but once, on May 2. In 1907 it was first observed on May 18 and 19, but on May 30 two specimens were taken, and on May 24, 31, June 2 and 9 single birds were seen. In 1908, it was recorded but once, May 17, and in 1909 not at all. From the foregoing it may be seen that the species is apparently somewhat more common than when Covert collected in this vicinity, but that it is still far from abundant.

Oporonis philadelphia. Mourning Warbler.—For the past five years we have found the Mourning Warbler fairly common during the spring migrations. In 1881 Covert looked upon the Mourning Warbler as rare in this County, as shown by the following statement: "This handsome bird is rare in the county, I have records of but three specimens." Several have been taken between 1902 and 1909, but in the season of 1907 they seemed to be particularly abundant. On May 28, 1907, four were noted in the vicinity of Ann Arbor, two males being secured at that time. On May 31, 1907, Wood took two near the Huron River below Ann Arbor. In 1908 and 1909, only single records were secured — May 24 in the former year and May 25 in the latter.

Icteria virens. Yellow-breasted Chat.—In Cook's list (1893) Steere is quoted as stating that the species had not at that time been observed at Ann Arbor, and Covert does not mention it in his list. On May 20, 1896, Covert in company with Dr. R. Wolcott and P. A. Taverner, found the species in song in an extensive swamp southwest of Ann Arbor. Several were seen on this date and five secured. In 1903, Mr. Covert wrote of the presence of the species in Washtenaw County as follows: "Dr. R. H. Wolcott and the writer found them very common in May, 1893, at various places and secured a fine series of specimens; these were taken about four miles south of Ann Arbor, Washtenaw Co. Again in the same locality in company with Prof. Dean C. Worcester on May 4th, 1895, I secured a pair (male and female) which were nesting." (Bull. Mich. Orn. Club, 1903, p. 60.)

From 1896 to 1906 nothing seems to have been recorded regarding the species, but on May 16, 1906, an adult male was taken by Wood in the same general locality as the above. On June 28, 1909, the species was heard singing by Wood in the same swamp, and

was again noted on July 3, 1909, by F. Novy. It is quite possible that the Chat bred in this vicinity in the summer of 1909, but of this we have no definite evidence.

Wilsonia pusilla. Wilson's Warbler.— Covert says of this species, "Very common during spring and fall, some remain with us all summer." Our present records certainly do not confirm this statement, and we very much doubt if the species was ever a summer resident here. At the present time it is a rare migrant both in spring and fall, but is much more so in the fall. Our earliest spring record is May 11 (1904). In 1903, the species was recorded on May 22, when J. J. Ricks secured a fine male at Portage Lake. On May 11, 1904, Wood secured a male in a swamp east of Ann Arbor, and noted another in the same locality on May 12. In 1906, but one record was secured — May 17.

In 1907, the species was unusually abundant. It first made its appearance on May 28, and continued with us in varying numbers up to June 9, being noted almost daily between these dates. In 1908, it was about normally abundant, being first recorded on May 15 and remaining until the 19th. In 1909, the species was first noted on May 18, and on the 19th Wood found it quite abundant along the river: it was observed in limited numbers until May 23.

Our only fall records are September 8, 1907, and October 7, 1908. From the foregoing, it can readily be seen that the species is much less common in the fall than during the spring migration. Moreover it is very local in its occurrence here; never being found far from water.

Wilsonia canadensis. Canadian Warbler.— Of this warbler Covert says, "A very common migrant, frequently remaining all summer." We have never found the Canadian Warbler in summer, although it has been observed late in May and occasionally is rather common at that time. However, the species is not generally distributed over the County during the migrations, but rather local, so we may have overlooked it.

Our earliest spring record is that of May 1 (1888) and our latest June 2 (1907). In the spring of 1907, the species was with us from May 13 to June 2, and was unusually abundant during the entire period. In the spring of 1908, it was first noted on May 11, and continued with us in limited numbers up to May 18. In 1909, it

was present from May 6 to 27, but was not at all common at any time during the migration. Our fall records are very limited; the only ones which we have been able to find are those of September 3, 1909, and August 23, 1908.

Thryothorus ludovicianus. Carolina Wren.— Covert considered the Carolina Wren in this vicinity as a very rare straggler from the south, and knew of but one record for the County — a female taken in a store at Ann Arbor, December 14, 1890. As far as we have been able to ascertain no further records were secured until June 6, 1909, when a male in full song was noted, and on June 20 a nest with five young was found near Ann Arbor (Auk, XXVI, p. 434). In Cook's list the species is recorded from Lenawee County (A. H. Boies), and Jerome Trombley is quoted as finding a nest in Monroe County in 1892, so that it is not at all surprising that the species should extend its range a little further north into this county. Whether or not it will eventually establish itself here as a permanent resident remains to be seen.

Bæolophus bicolor. Tufted Titmouse.— In Cook's list, the Tufted Titmouse is given as a regular winter resident at Ann Arbor (on the authority of Steere), but Covert does not mention it in his list of 1881. Although it may have been a regular winter resident at the time when Steere wrote the above, it certainly is not so at the present time. During the fall and winter of 1903, the species appeared to be fairly common, as J. J. Ricks noted a flock at Portage Lake, and it has been noted several times in the vicinity of Ann Arbor on December 13, 1900, February 7, 21, and March 13, 1904. On March 24, 1907, a single specimen was noted west of Ann Arbor. A breeding record was secured for this locality on May 24, 1908 (Auk, XXV, p. 322), and in the fall of the same year — October 25 — a pair was observed in the City.